



Virginia

Biobased Fuels, Power, and Products State Fact Sheet

Growing a Cleaner, Stronger Economy in Virginia

An estimated 12.7 billion kWh of electricity could be generated using renewable biomass resources in the state. The estimated supplies of urban and mill residues available for energy use in Virginia are 866,000 and 2,860,000 dry tons per year, respectively. The large forests in the state have the potential to supply 1,794,000 dry tons per year of forest residues. The agriculture industry has the potential to supply 586,000 dry tons per year of agriculture residues available from corn stover and wheat straw and the potential to produce 2,160,000 dry tons of energy crops.

In 1999 approximately 2.7 billion kWh of net electricity generation was from biomass in Virginia. About 39% of this electricity was from MSW/landfill gas; sixty percent was from wood/wood waste. MSW is being converted into electricity at the Alexandria/Arlington Resource Recovery Facility, which processes 975 tons of solid waste, generating up to 23 MWh. This power is sold to Dominion Power to provide electricity to 300,000 residents of the Arlington County and the city of Alexandria.

Current research in Virginia involves examining other viable options for biopower. One project includes an innovative biogas demonstration project being implemented in the rural southern region of the state. The project involves measuring the economic viability of a low maintenance, covered anaerobic lagoon, which digests pig waste to produce methane gas. The gas is used to fire a generator, which is capable of producing 80% of the electricity needed of the test farm. Another project that is being funded through the Southeastern Regional Biomass Energy Program (SERBEP) and the Virginia Department of Mines, Minerals, and Energy (DMME) will fabricate and test technology designed to combust chicken litter that can be used as a fuel source to heat chicken houses. Innovative processes such as these could add substantially to the energy resources of the state of Virginia.

Biobased Fuels, Power, and Products In Virginia

Bio-Industry	Sales (\$1,000)	Employees	Capacity	Number of Facilities
Power	N/A	69	107MW	18
Fuels	N/A	N/A	N/A	0
Products	N/A	N/A	- -	0

N/A - no information available

- - Comparative capacity data not available among products

Federal R&D Partners

Eastern Shore Agricultural Experiment Station (Painter)

Virginia Polytechnic Institute and State University (Blacksburg)

Biomass Resources

Corn:	470,000 acres planted 40,590,000 bushels produced
Soybeans:	500,000 acres planted 17,280,000 bushels produced
Wheat:	200,000 acres planted 10,200,000 bushels produced
CRP:	51,981 acres enrolled
MSW:	10,661,000 tons generated
Forest Land:	16,074,000 acres
Poultry:	298,896,000 head
Livestock:	2,050,000 head



Federally Funded Biomass RD&D in Virginia

U.S. Department of Agriculture

- Disturbance and Recovery Processes in Wetland and Riparian Forests
- Conversion of Corn Fiber to Xylitol
- Management of Resistant Weeds
- Improving the Nitrogen Use Efficiency of Winter Wheat in Virginia
- Restoration of Drastically Disturbed Lands
- Molecular Analysis of Bacterial Genes and Enzymes for the Production of Useful Chemicals
- Sustainable Management Strategies for Tomato and Lettuce
- Applications of Remote Sensing to Forest Assessment and Inventory

Select a project
title for details

For additional information on RD&D Projects, please click on the project title.

For additional information on state activities, please contact:

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Data sources and the data collection methodology for the “Biobased Fuels, Power, and Products State Profiles” are available at <http://www.bioproducts-bioenergy.gov/>.

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